



ENVIRONMENT PROTECTION LICENCE NO: 21029

March 2019 Monthly Report

FOR

**Princes Highway Upgrade
between Berry and Bomaderry**

Document control

File name	DSWJV-EPL21029-March-2019
Report name	Environment Protection Licence 21029 March 2019 Monthly Report – Princes Highway Upgrade between Berry and Bomaderry
Revision number	1

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Revision history

Revision	Date	Description	Approval
0	07/04/19	Draft	
1	12/04/19	Final	J.Mckenzie/B.Binns

Distribution of controlled copies

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1 INTRODUCTION

The Downer Seymour Whyte Joint Venture (DSWJV) is contracted by Roads and Maritime Services (Roads and Maritime) to upgrade 10.3 kilometres of the Princes Highway between Mullers Lane (south of Berry) and Cambewarra Road, Bomaderry in New South Wales (NSW) (the Project). The project will provide a four-lane divided highway (two lanes in each direction) with median separation.

The project is one of a series of upgrades to sections of the Princes Highway which aims to provide a four-lane divided highway between Waterfall and Jervis Bay Road, Falls Creek. This would improve road safety and traffic efficiency, including for freight, on the NSW South Coast.

Figure 1 provides an overview of the project location.

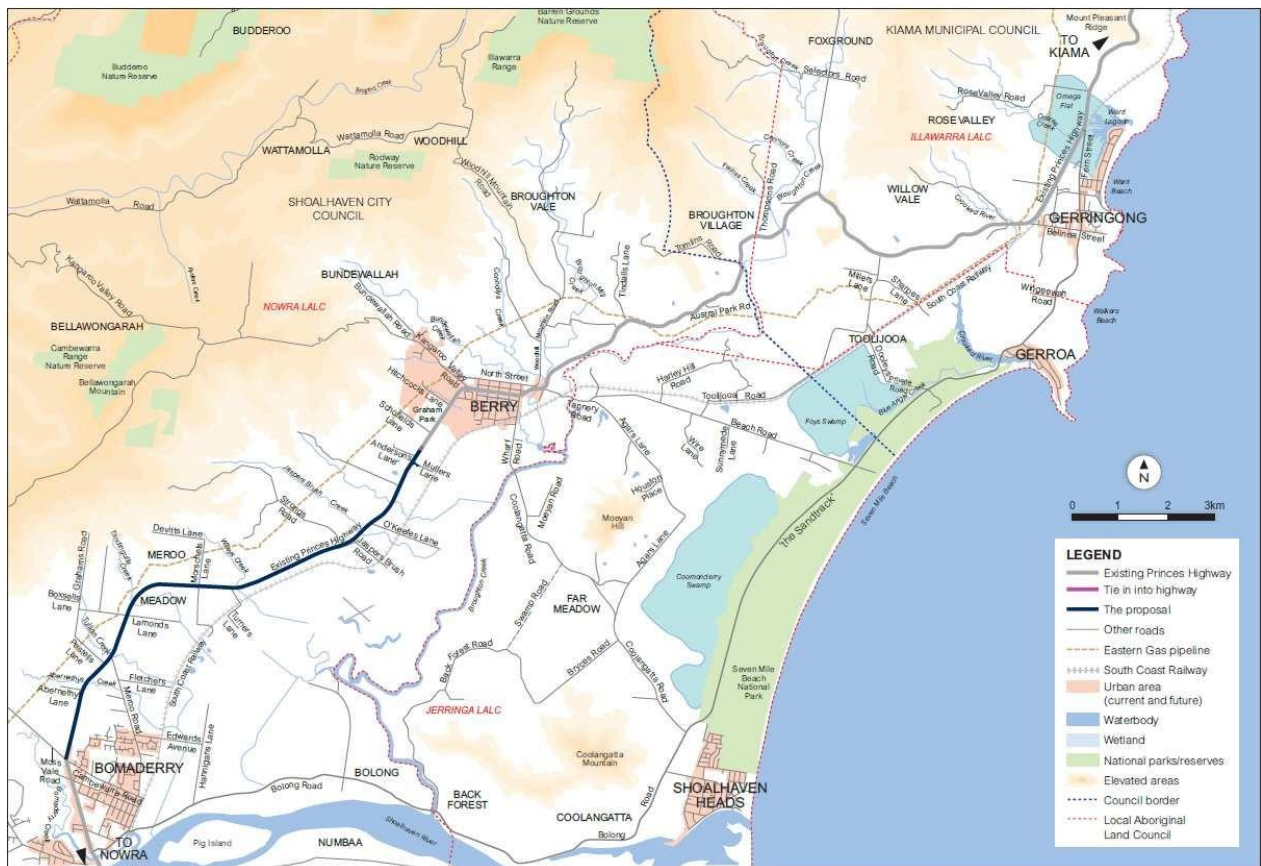


Figure 1-1 Project Location

This report provides the results of monitoring undertaken during March 2019 as required by the project’s Environment Protection Licence (EPL 21029) Condition R4.1.

2 NON-COMPLIANCES

There were two non-compliances with EPL conditions in March 2019:

1. Works outside EPL premised area: while constructing a new permanent access road south from Lamonds Lane at Meroo Meadow, sediment controls and stockpiled topsoil have been placed outside the Project’s licensed area. Sediment controls had been installed around the work area, and therefore there was no risk of environmental harm from these activities. Project boundary fencing is being relocated to within the approved project limits. A review of site establishment processes has been undertaken to ensure final checks undertaken prior to site disturbance.
2. Noise monitoring was not undertaken this month at monitoring point #15 due to safety concerns. The monitoring location is adjacent to the Princes Highway and live traffic and there are no barriers for protection to enable attended monitoring to be undertaken safely. Additional controls or an alternate nearby location (to be agreed with EPA) will be implemented for future monitoring.

3 RAINFALL AND WEATHER

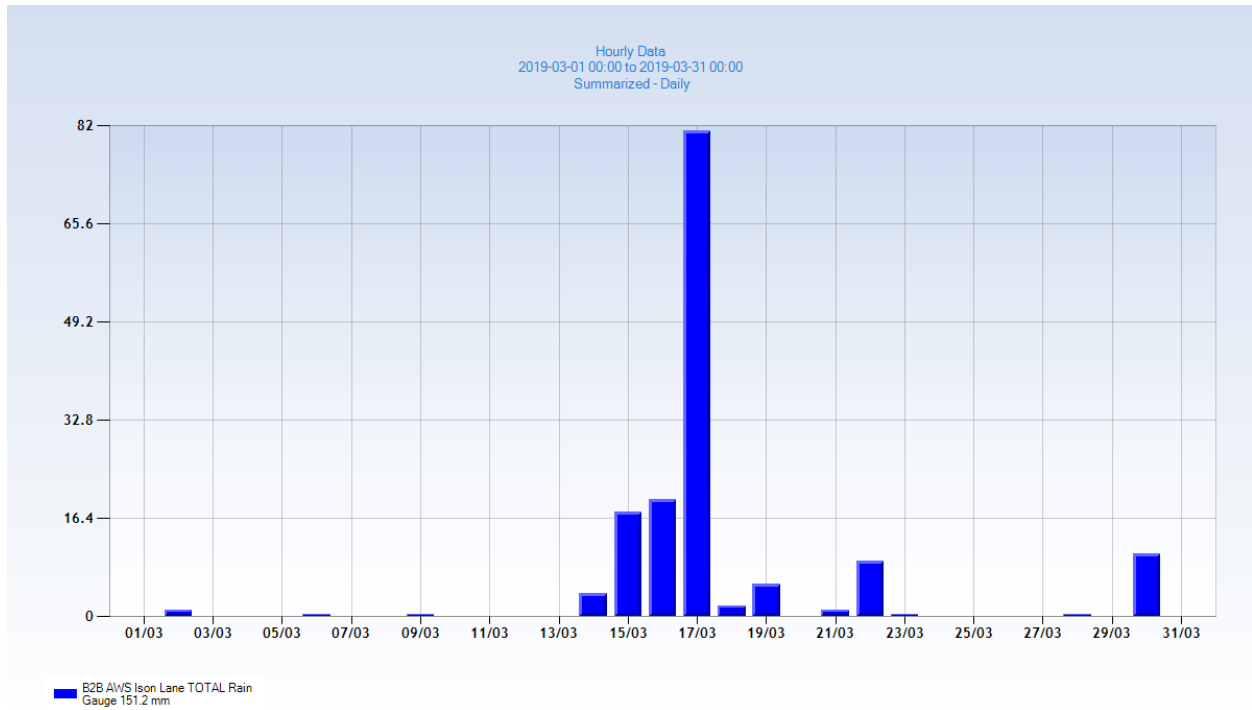
The RMS automatic weather station is situated at Ison Lane, Jaspers Brush, located adjacent to a main ancillary compound (Isons Compound) for the project. The results of rainfall monitoring for March 2019 are provided in Figure 3-1 and Figure 3-2 below.

Figure 3-1 March 2019 Rainfall monitoring results

Location	Monthly rainfall recorded (mm)
Ison Lane, Jaspers Brush (RMS automatic weather station)	151.2mm

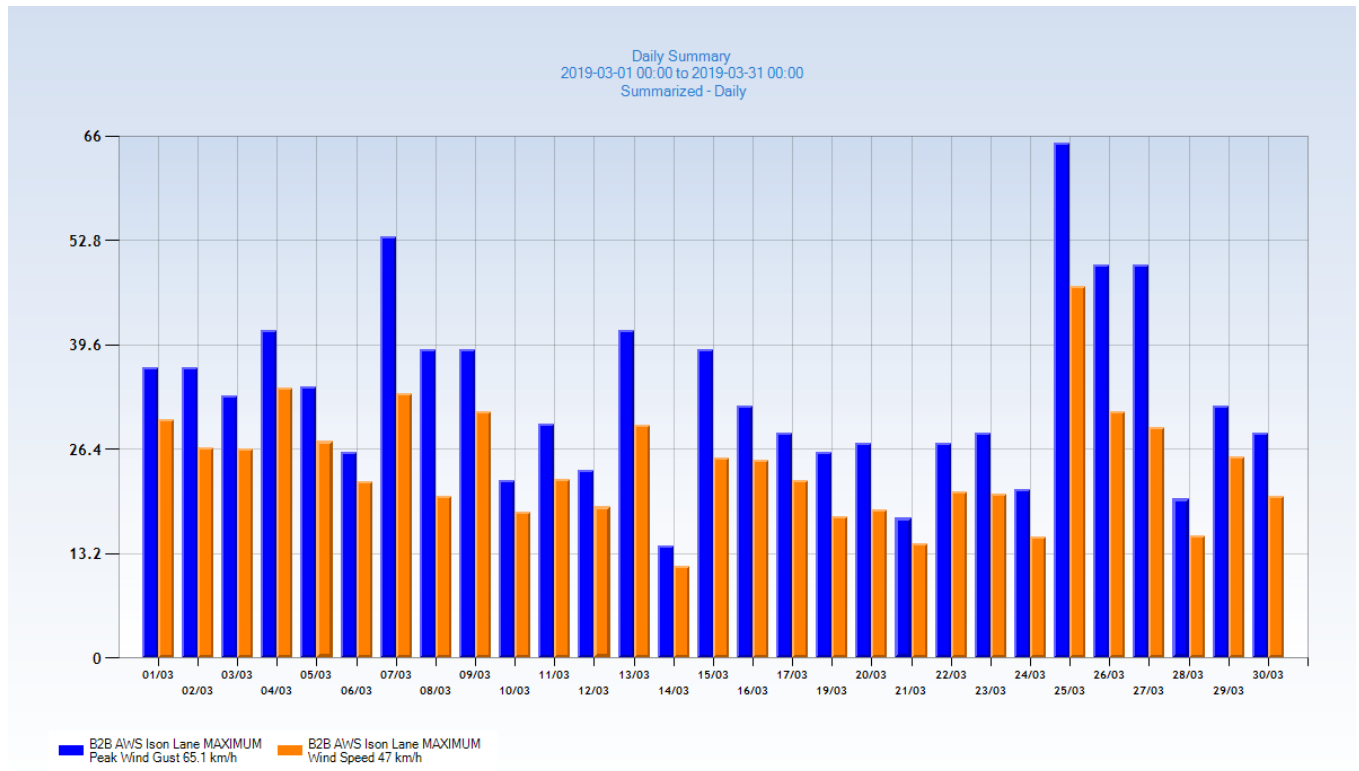
During March 2019 six rainfall events were recorded at the project specific weather station (Ison Lane, Jaspers Brush (RMS automatic weather station)). The largest rainfall event was on Sunday the 17th of March during which 80.2mm of rainfall was recorded. This was a high intensity event with 70.4mm falling within a six-hour period, corresponding to an average recurrence interval (ARI) of 2 years for a six-hour storm duration.

Figure 3-2 March Rainfall Results Ison Compound Weather Station



During March the predominant wind was from the South. The highest wind gust recorded was 65.1 km/h and maximum wind speed was 47.0 km/h (refer Figure 3-3). DSWJV continue to monitor site activities, implement dust suppressant across the site and utilise a fleet of water carts during working hours.

Figure 3-3 March 2019 Wind Results Isons Compound Weather Station



4 SEDIMENT BASIN DISCHARGE

Fourteen sediment basins were licensed under the EPL during March 2019. The list of basins is outlined in Table 4-1 below. The most recent basins to be commissioned were TB22.10N at Strongs Road, Jaspers Brush and TB24.45N near Turners Lane, Meroo Meadow on 4 March 2019.

Table 4-1 March 2019 Sediment basin discharge(s)

EPA Identification No.	Location (adjacent address)	Discharge Date	pH (6.5-8.5)	Total Suspended Solids (<50mg/L)	Oil and Grease (none visible)
PB19820.S	Mullers Lane	26/03/2019	6.76	38	None visible
TB21150.S	Opposite O'Keeffe's Lane	5/03/2019	7.8	16	None visible
		21/03/2019	7.86	48	None visible
		22/03/2019	7.38	34	None visible
		26/03/2019	7.6	29	None visible
TB21500.N	Opposite Jaspers Brush Road	4/03/2019	7.26	15	None visible
		5/03/2019	7.67	19	None visible
		22/03/2019	7.93	33	None visible
TB22100.N	Strong's Road	21/03/2019	6.94	8	None visible
TB22250.S	Opposite Strong's Road	26/03/2019	6.78	33	None visible
TB22650.S	Opposite Isons Compound	19/03/2019	6.99	<5	None visible
		20/03/2019	6.7	32	None visible
		21/03/2019	7.49	6	None visible
		22/03/2019	7.31	12	None visible
TB22800.N	Ison Compound	18/03/2019	7.05	36	None visible
TB23400.S	Jaspers Brush North of Wileys Creek	5/03/2019	6.63	6	None visible
		19/03/2019	7.21	14	None visible
TB23450.S	Jaspers Brush North of Wileys Creek	25/03/2019	8.3	4.3	None visible
		26/03/2019	6.89	33	None visible
TB23800.S	Wileys side track compound	22/03/2019	7.54	12	None visible
TB25100.N	Devitts Lane	Not discharged during March 2019			
TB25700.N	South of Devitts Lane	Not discharged during March 2019			
TB26150S	North of Tandingulla Creek	26/03/2019	7.23	20	None visible
TB28900.N	Abernethy's Lane	18/03/2019	6.96	10	None visible

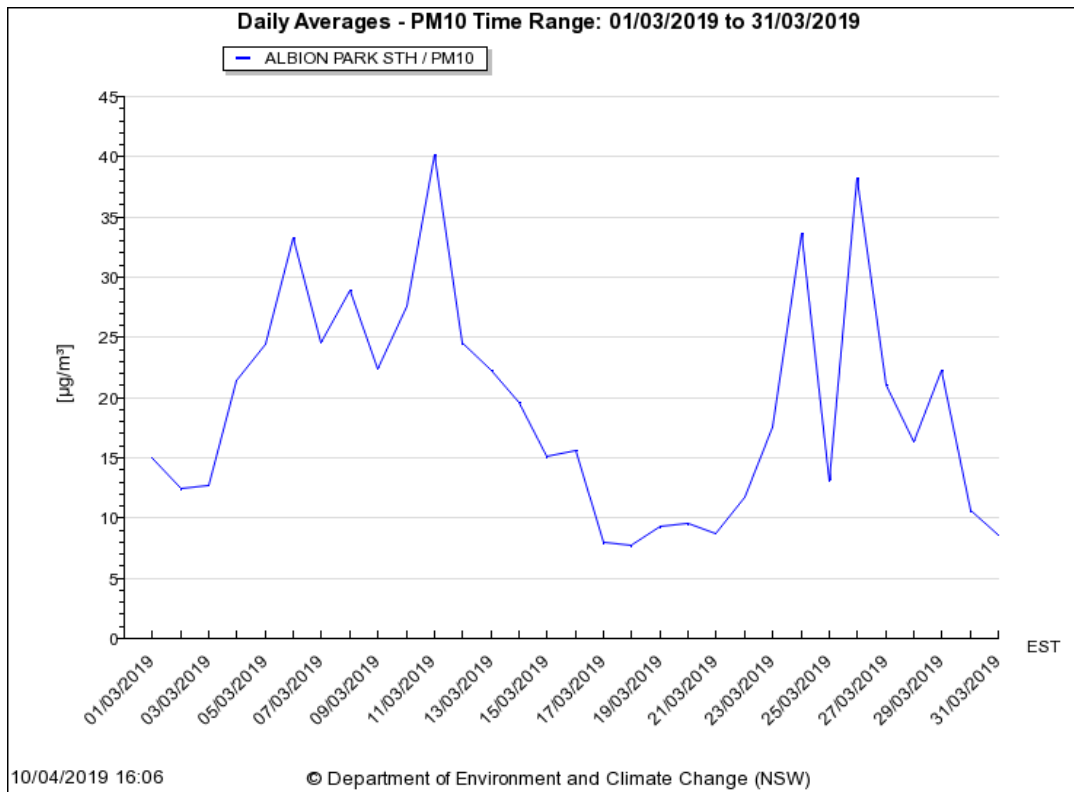
***Lab results for Total Suspended Solids limit of reporting = 5 mg/L**

5 AIR MONITORING RESULTS

Dust deposition gauges for the project were installed on 27 February 2019 and changed on 29 March 2019 within the NATA accredited window (30 days +/- 2 days). Air quality has been assessed according to the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA, 2016). Results are summarised in Table 5-1 below.

Figure 5-1 provides air quality data at the nearest OEH ambient air quality monitoring station to the project (Albion Park, approximately 25 km north of the project area).

Figure 5-1 - Daily Average PM10 levels at Albion Park South NSW Air Quality Monitoring Station, courtesy of NSW Office of Environment and Heritage



Exceedances of the monthly criteria were observed at EPL monitoring locations DDG-B (10A Jaspers Brush Road) and DDG-H (10 Lamonds Lane), refer Table 5-1 for the data.

During the changeover of dust deposition gauges, grass was noted in gauge DDG-B, which was likely due to recent grass cutting in the surrounding paddock. This observation is reflected in the higher level of combustible matter (4.1 g/m²/month) recorded at this gauge, the highest for the project area. Another monitoring point with a similarly high level of combustible matter was DDG-I at Boxsells Lane which is also located in a grassy paddock.

The monitoring point with the highest level of dust during the month was DDG-H at Lamonds Lane. This monitoring location is immediately adjacent to the construction site. DSWJV are reviewing the likely causes of this exceedance and will implement additional controls where possible to minimise further dust impacts.

Despite exceedances of the monthly criteria for deposited dust at two monitoring locations during March, the rolling average at all locations remains below the relevant criteria for the construction period to date. DSWJV will continue to review and implement air quality control measures in the project area including the use of water carts, polymer spray and stabilisation of working areas where possible.

Table 5-1 March 2019 Air quality monitoring results

EPA Identification No.	Location (adjacent address)	Ash Content g/m ² ,month	Combustible Matter g/m ² ,month	Total Insoluble Matter g/m ² ,month	Rolling Average (Total Insoluble Matter) g/m ² ,month
1-DDG A	10 Croziers Lane, Jaspers Brush	1.4	1.3	2.7	3.3
2-DDG B	10A Jaspers Brush Road, Jaspers Brush	2.0	4.1	6.1	2.3
3-DDG C	20C Strongs Road, Jaspers Brush	1.4	0.5	1.9	3.2
4-DDG D	10C Jaspers Brush Road, Jaspers Brush	1.5	0.3	1.8	2.0
5-DDG E	30 Ison Lane, Jaspers Brush	0.8	0.3	1.1	1.4
6-DDG F	Lot 209 DP 1210788	1.7	0.4	2.1	3.0
7-DDG H	10 Lamonds Lane, Meroo Meadow	6.1	0.6	6.7	3.8
8-DDG I	19 Boxsells Lane, Meroo Meadow	0.8	2.8	3.6	1.8
9-DDG J/K	265 Princes Highway, Meroo Meadow	0.8	0.2	1.0	3.4
10-DDG L	1028 Meroo Meadow, Meroo Meadow	1.6	0.3	1.9	3.4
11-DDG M	32 Elvin Drive, Bomaderry	1.0	0.4	1.4	2.2
12-DDG N	9 Devitt's Lane, Meroo Meadow	1.1	0.3	1.4	2.0
13-DDG P	24 Abernethys Lane, Meroo Meadow	1.9	0.5	2.4	3.9

Note: bold type indicates a result above the relevant criteria

6 NOISE MONITORING RESULTS

Noise monitoring was undertaken in accordance with the Construction Noise and Vibration Management Plan (CNVMP) for the project in March 2019. No exceedances above predicted levels for the relevant activity were recorded.

The results of March noise monitoring are summarised in Table 6-1 below.

Table 6-1 March 2019 Noise Monitoring Results

EPA ID No.	Location description	Construction activity	Date	Time	L(A) _{eq} 15min	Comments
15	L1 - B210 Princes Highway, Jaspers	<i>Monitoring not undertaken this month due to safety concerns. Monitoring location adjacent to Princes Highway with no safety barriers for separation of traffic. Additional controls or an alternate location to be identified for future monitoring.</i>				
16	L2 - 20C Strongs Road, Jaspers Brush	Water cart filling up	29/3/2019	10:45 11:00	60.2	Princes Highway traffic dominant noise source. Water truck filling up (3 occurrences), reversing squawker (1 occurrence)
17	L3 - 30 Ison Lane, Jaspers Brush	Compound Operation	29/3/2019	10:22 10:37	52.8	Princes Highway traffic dominant noise source
18	L5 - 15 Turner Lane, Jaspers Brush	Piling, Earthworks	29/3/2019	11:15 11:30	61.1	Princes Highway traffic dominant noise source. Piling rig operating, reversing squawkers (6 occurrences), bulldozer moving position
19	L6 - B710 Princes Highway, Jaspers Brush	Earthworks	29/3/2019	9:53 10:08	61.0	Princes Highway traffic dominant noise source. Truck and dogs entering work area (3 occurrences), excavator moving past logger (1 occurrence), LV's driving past (3 occurrences)
20	L7 - 310C Princes Highway, Jaspers Brush	Earthworks	29/3/2019	11:45 12:00	65.9	Princes Highway traffic dominant noise source. Grader operating from between 10-200m away from monitor, padfoot roller operating, truck and dog leaving site (5 occurrences)
21	BG08 - 19 Boxsells Lane, Meroo Meadow	Nil – no construction works within several hundred metres	29/3/2019	9:15 9:40	53.4	Traffic on Boxsells Lane dominant noise source.
22	BG09 - 1028 Meroo Road, Meroo Meadow	Earthworks	29/3/2019	8:56 9:11	58.8	Traffic on Meroo Road dominant noise source. Refuelling cart idling 50m away, portable toilet being pumped out.
23	L8 - 24 Abernethys Lane, Meroo Meadow	Earthworks	29/3/2019	12:18 12:33	67.7	Smooth drum roller dominant noise source, operating back and forth with reversing squawker when reversing (11 occurrences). Light vehicles driving past
24	BG10 - 35 Gardenia Crescent, Bomaderry	Nil – no construction works within several hundred metres	29/3/2019	8:05 8:20	51.2	No construction works audible – distant traffic from Princes Highway, birds calling.
25	BG11 - 38 Elvin Drive, Bomaderry	Earthworks	29/3/2019	8:25 8:40	63.4	Princes Highway traffic dominant noise source. Grader operating from between 30-100m away, several workers on foot 100m away.

7 ENVIRONMENTAL COMPLAINTS

There were five environmental complaints received in March, all were closed out within the required timeframes and have not been the subject of further complaint at the time of submission.

Table 7-1 January 2019 Environmental Complaints

Complaint No.	Date/time complaint received	Nature of Complaint	Actions and due date	Status/timing
1	14/3/2019 10:20AM	Dust generation from vehicles entering site at a location near a resident	Shade cloth on boundary fence between project area and the resident was installed as a mitigation measure.	Closed on the same day
2	18/3/2019 10:30AM	Mud on resident's driveway following rainfall. n.b driveway crosses through project area.	DSWJV cleaned the mud off the resident's driveway and installed a bund to prevent it occurring again.	Closed within 24 hours
3	18/3/2019 9:00PM	Lack of notification for OOHW	Administrative error from community manager in which an email had been sent to resident notifying of OOHW however the email had bounced back unnoticed. Apology issued to the resident by community manager and correct email address was supplied.	Closed on the same day
4	25/3/2019 7:45PM	OOHW – water cart accessing area of site which had not been approved for OOHW to fill up tanker.	Apology issued by community manager. Issue raised with DSWJV construction team to include use of ancillary facilities when planning for OOHW.	Closed within 72 hours
5	29/3/2019 9:30PM	Noise complaint from reversing squawkers from OOHW	Resident had agreed to OOHW. Alternative accommodation offered to the resident who did not give a reply.	Closed within 24 hours